

RESEARCH DEPARTMENT

LARK STOKE U.H.F. RELAY STATION : SUMMARY OF INSTALLATION

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for Head of Research Department

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U.H.F. RELAY STATIONS : SUMMARY OF INSTALLATION

NAME: 102.8 LARK STOKE

TYPE: 1

TRANSMISSIONS COMMENCED: 24.4.67 (TRADE) 8.5.67 (SERVICE)

SITE DATA

LOCATION: 11 km (7 miles) south of Stratford

GRID REFERENCE: SP 187427

HEIGHT, a.o.d. : 260 m (854 ft)

SUPPORT MAST

TYPE: 12 m (40 ft) Tower

OVERALL HEIGHT: 22.9 m (75 ft)

FREQUENCIES

BAND: IV

CHANNELS: 23, 26 (BBC-2)
29, 33 (BBC-1)

RECEPTION

PARENT: Sutton Coldfield

CHANNELS: 40 (BBC-2), 43
46 (BBC-1), 50

POLARIZATION: Horizontal

AERIALS: 2 x 4λ troughs

AERIAL HEIGHTS: 6.1 m (20 ft)
9.1 m (30 ft)

TRANSMITTERS

TYPE: Pye klystron 1 kW

OPERATING POWER: (1) 0.17 kW
(2) 0.67 kW

FEEDERS

TRANSMITTING: 15 m (50 ft) HF 1⁵/₈
+ 4.5 m (15 ft) HF 7⁷/₈
RECEIVING: BICC T 3319

TRANSMITTING AERIAL

TYPE: Standard Cardioid

RADIATION CHARACTERISTICS

POLARIZATION: Vertical

RADIATING LENGTH: 16λ

H.R.P. : Fig. 1

V.R.P. : Fig. 2

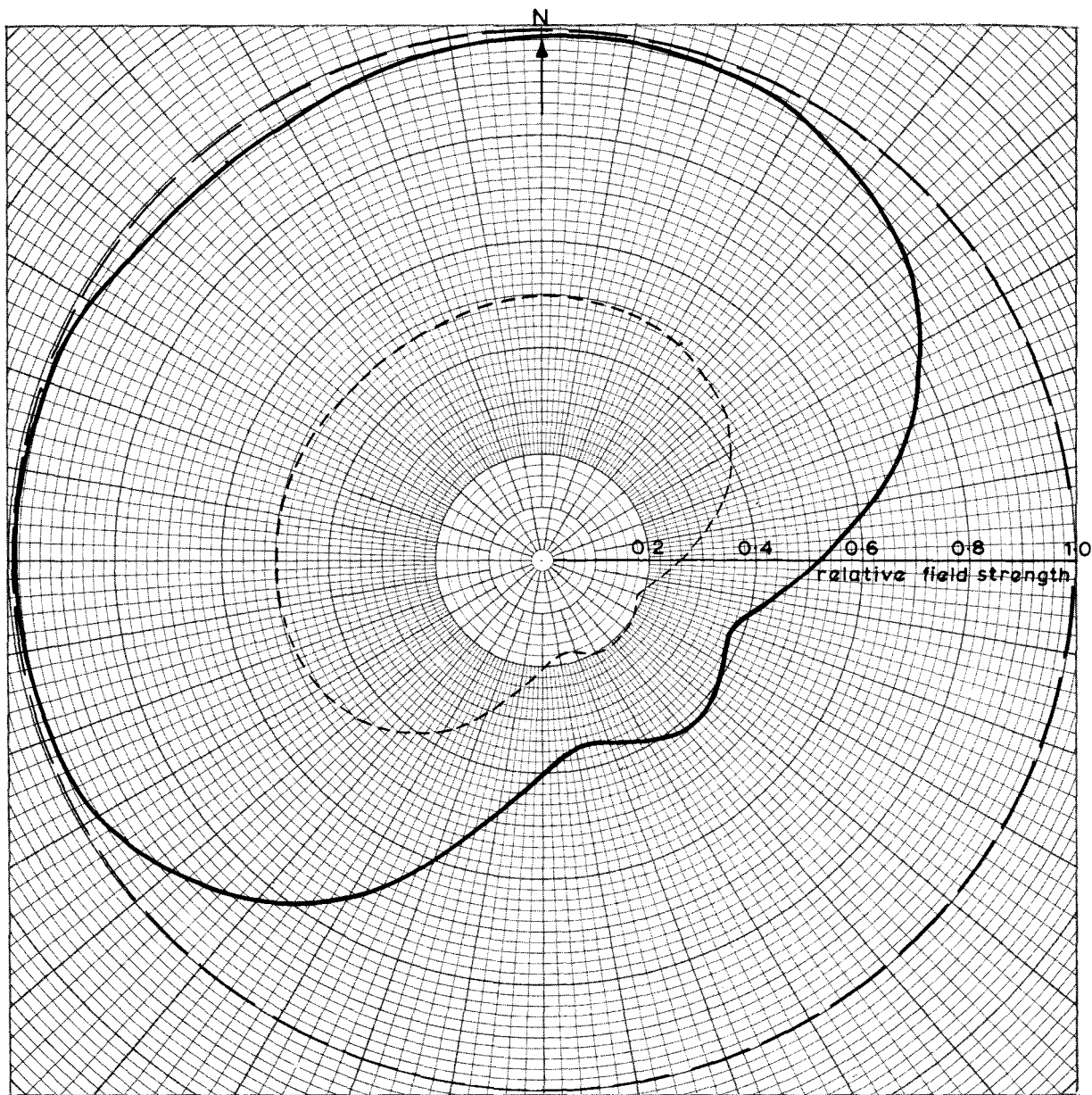
MEAN HEIGHT: 17.2 m (56ft 6in.)

MEAN E.R.P. : (1) 1.6 kW
(2) 6.3 kW

MAXIMUM E.R.P. : (1) 2.5 kW
(2) 10 kW

NOTES:

- (1) Initial Power
- (2) Power increase when Station 121 Stafford comes into service.
- (3) Transmitter power will be increased further to offset loss in 4-channel combining unit.

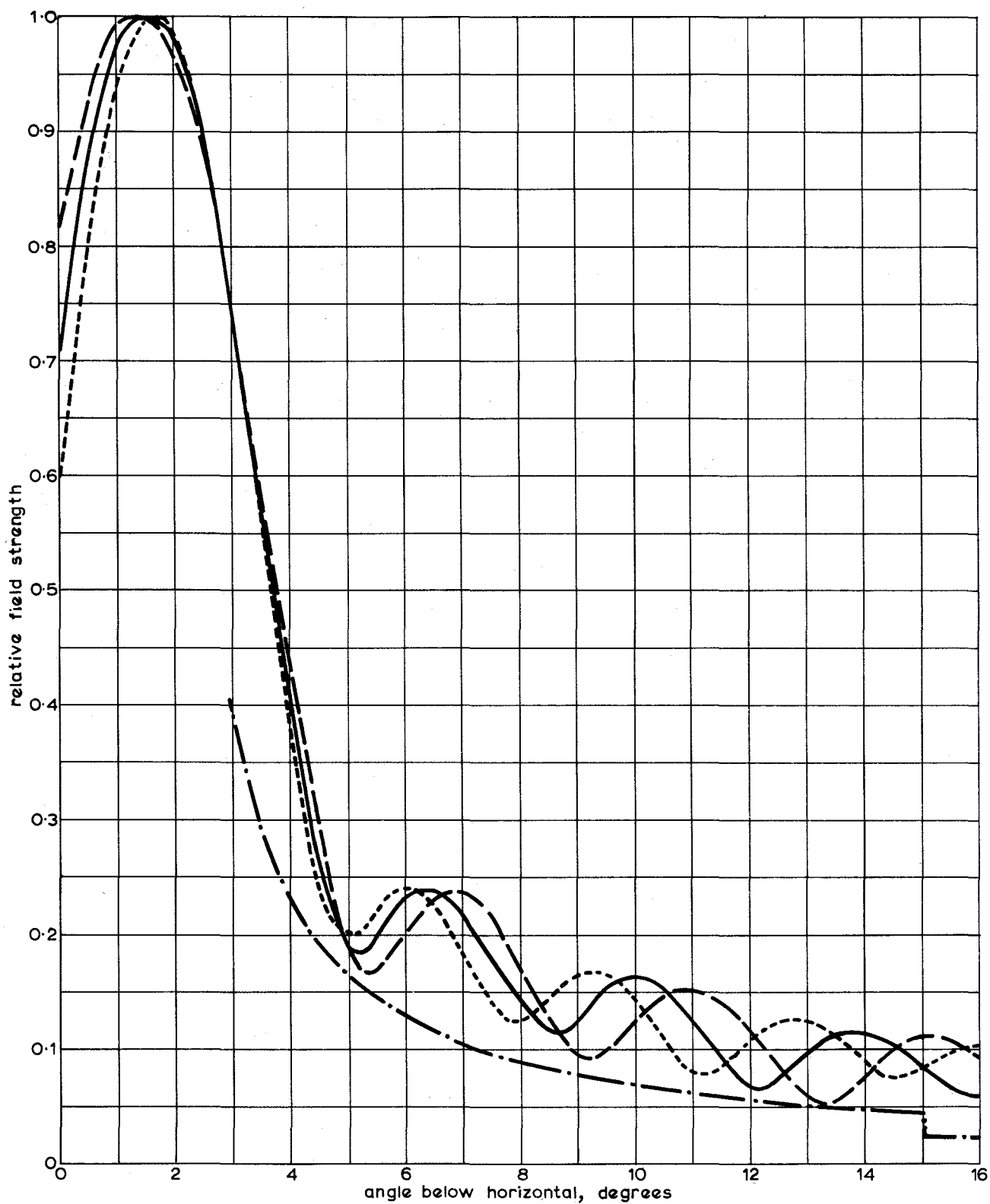


LARK STOKE

Fig.1. Horizontal radiation pattern
VERTICAL POLARIZATION

- Transmitter power : 0.17 kW
Mean E.R.P. : 1.6 kW
- Transmitter power : 0.67 kW
Mean E.R.P. : 6.3 kW
- Stockholm E.R.P. limit

Unit field corresponds to an E.R.P. of 10 kW



LARK STOKE

Fig. 2. Vertical radiation pattern

- — — — — 475 MHz
- 528 MHz
- - - - - 580 MHz
- . - . - . Specified minimum field.